TABLE 3.2.3-3

Environmental Comparison of the Bonds Corner Alternative with the Proposed Route MPs 16.3 to 31.5

Environmental Factor	Unit	Bonds Corner Alternative	Proposed Route
Length of route	Miles	20.0	15.2
Construction right-of-way [a]	Acres	145.5	110.5
Permanent right-of-way [b]	Acres	121.2	3.7
Canals crossed	Number	10	1
Drains crossed	Number	7	3
Residences within 100 feet	Number	8	6
Lake Cahuilla Area of Critical Environmental Concern (ACEC) crossed	Miles	2.2	0.3
BLM-managed land crossed within designated utility corridor	Miles	1.0	4.1
BOR-withdrawn land crossed within designated utility corridor	Miles	0.0	0.0
BLM-managed land crossed outside designated utility corridor that would require a CDCA Plan amendment	Miles	2.4	6.8
BOR-withdrawn land crossed outside designated utility corridor	Miles	1.8	0.0
Adjacent to/within road right-of-way and easements	Miles	20.0	14.5
East Mesa ACEC crossed	Miles	0.0	2.2

[a] Based on a 60-foot-wide construction right-of-way.

[b] Based on a 2-foot-wide permanent right-of-way for the proposed route because the majority of the pipeline in this area would be installed within the county road right-of-way associated with Evan Hewes Highway and Hunt Road. Based on a 50-foot-wide permanent right-of-way for the Bonds Corner Alternative because the pipeline would not be installed within road rights-of-way.

The Bonds Corner Alternative would be 4.8 miles longer than the proposed route and would require 35.0 more acres of construction right-of-way. The Bonds Corner Alternative would also require significantly more permanent right-of-way compared to the proposed route (117.5 acres) because the majority of the proposed route in this area would be installed within the county road right-of-way associated with Evan Hewes Highway and Hunt Road. Because the proposed pipeline would be located within the road right-of-way, only a 2-foot-wide permanent right-of-way would be retained. Although the Bonds Corner Alternative would be adjacent to existing road rights-of-way for its entire length, the pipeline would not be within the actual road rights-of-way because CalTrans' regulations prohibit the installation of high-pressure natural gas pipelines within any State highway right-of-way except by special exception as discussed below for the CalTrans Alternative. The alternative would be within 100 feet of more residences and require more canal and drain crossings than the proposed route. The new right-of-way crossed by the alternative would be adjacent to SR 98 in relatively undisturbed habitat across BLM lands. An additional disadvantage of the alternative is that it would cross 2.2 miles of the Lake Cahuilla ACEC compared to 0.3 mile of the ACEC that would be crossed by the proposed route. As discussed above, the Lake Cahuilla ACEC was designated to recognize and protect the significant cultural resources found along the eastern edge of the ancient shoreline of Lake Cahuilla. North Baja states that the crossing of the Lake Cahuilla ACEC for 2.2 miles elevates the chance of unanticipated significant cultural resources discovery and disturbance. A disadvantage of the proposed route is that it would cross 2.2 miles of the East Mesa ACEC; the Bonds Corner Alternative would not cross the East Mesa ACEC. Both the proposed route and the alternative would be outside a designated utility corridor on BLM-managed land (6.8 and 2.4 miles, respectively) and would require an amendment to the CDCA Plan. The Agency Staffs believe the greater amount of land disturbance and permanent right-of-way required for the Bonds Corridor Alternative outweigh its advantages and eliminated it from further consideration.

Imperial Sand Dunes Recreation Area (ISDRA) Crossing Alternatives

The ISDRA is an important and intensively utilized OHV and camping area. To address the concerns of commentors concerning potential conflicts with existing and planned recreational use in the ISDRA, four alternatives were considered for crossing the ISDRA: (1) the CalTrans Alternative, (2) the ISDRA North Alternative, (3) the ISDRA Transmission Line Alternative, and (4) the ISDRA Grays Well Road Alternative. Figures 3.2.3-4 and 3.2.3-5 illustrate the ISDRA route siting factors and alternatives. Concerns considered during the evaluation of these alternatives included sensitive biological and cultural resources as well as technical issues such as pipeline construction through sand dunes, the crossings of the All-American Canal and Interstate 8, and the avoidance of conflicts with other linear facilities (e.g., the freeway, several electrical transmission lines, and buried communication facilities). Additionally, another major construction effort planned in the same general location, the lining of the All-American Canal, needed to be considered.

CalTrans Alternative – During North Baja's public outreach efforts, the Off-Road Business Association suggested that North Baja consider routing the IID Lateral entirely within the CalTrans right-of-way where it crosses the ISDRA because the right-of-way is off-limits to OHV use. However, CalTrans acquires and manages its easements for road transportation purposes only. Section 606.4 of the CalTrans *Encroachment Permits Manual* states "Placement of longitudinal utilities encroachments within freeway and expressway right-of way is prohibited under Department policy." Section 607.3 states "High risk pipelines conveying gas, oil or other flammable fluid are not permitted unless they are dedicated to a public use." High risk pipelines are defined in the CalTrans *Manual on High & Low Risk Underground Facilities within Highway Rights of Way* to include natural gas pipelines greater than 6 inches in diameter, or pipelines operating at a pressure greater than 60 psig.

The *Encroachment Permits Manual* also states that under unusual circumstances, requests for longitudinal placement can be reviewed under the exception process for State highways, and the approval of both the State and Federal Highway Administration is required. Based on past experience with CalTrans, the time frame for it to review and potentially consider an exception would be lengthy and CalTrans would be unlikely to approve a parallel encroachment when a feasible alternative exists as is the case for the proposed Project. Consequently, the CalTrans Alternative is not considered to be feasible and was eliminated from further consideration.

ISDRA North Alternative – The ISDRA North Alternative stays north of the All-American Canal between MPs 2.0 and 8.2 of the proposed route. This alternative takes advantage of relatively level terrain immediately north of the All-American Canal and would avoid two crossings of the All-American Canal and Interstate 8. The alternative would provide a feasible location to stage a long HDD to the west under the sand dunes and would emerge in Dune Buggy Flats, which would avoid difficult construction in the dunes. However, consultation with IID staff revealed that the All-American Canal Lining Project conflicts with this route alternative. The IID intends to utilize the level area north of the existing canal for a temporary canal and construction work area (Hocking 2006).

The ISDRA North Alternative would avoid the high OHV-use Buttercup Management Area; however, it would place the pipeline in two other high OHV-use areas. One of these areas lies at the base of Test Hill, which is an area heavily used in the fall and winter. The other area is at Dune Buggy Flats, an area occupied from late November through March of each year by thousands of OHV users and campers. Because of the locational conflict with the All-American Canal Lining Project and the fact that the alternative only shifts, rather than avoids, potential conflicts with recreational land uses, this alternative was eliminated from further consideration.

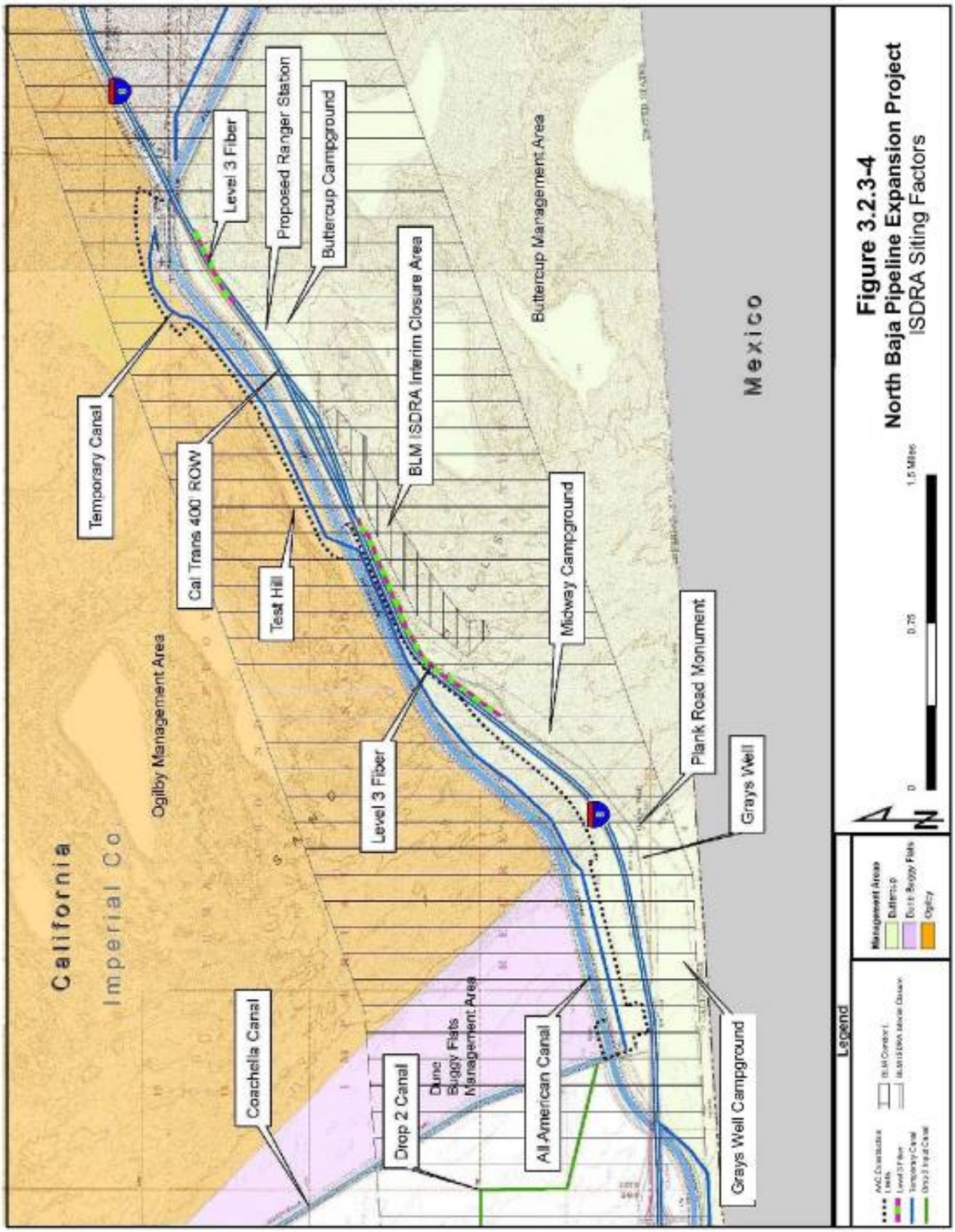

Figure 3.2.3-4
North Baja Pipeline Expansion Project
ISDRA Siting Factors

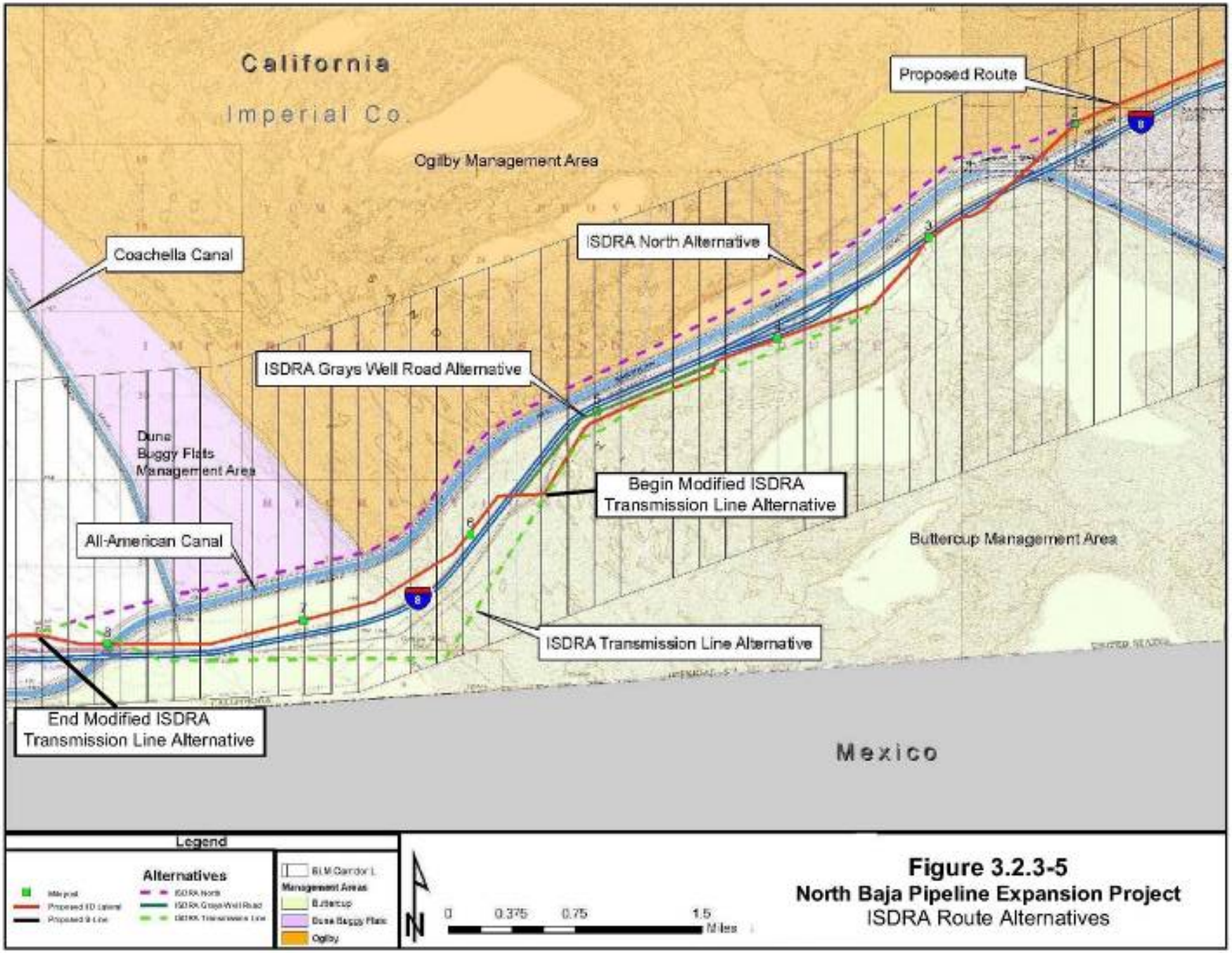

Figure 3.2.3-5
North Baja Pipeline Expansion Project
ISDRA Route Alternatives

ISDRA Transmission Line Alternative – The ISDRA Transmission Line Alternative was considered in an effort to minimize new impacts through the ISDRA. This alternative would be south of the All-American Canal and Interstate 8 and would parallel the transmission line corridor through the ISDRA area. This alternative deviates from the proposed route at MP 3.5 (southwest of the HDD of the All-American Canal and Interstate 8) and continues southwest and follows the existing transmission line for approximately 3 miles. The alternative then turns west and would cross Interstate 8 and the All-American Canal (using the HDD method) before rejoining the proposed route at approximate MP 8.2. Although both routes would cross Interstate 8 and the All-American Canal, the proposed route would require two separate crossings (a conventional bore at MP 5.7 for Interstate 8 and an HDD at MP 8.1 for the All-American Canal). The alternative route would only require one HDD that would cross both Interstate 8 and the All-American Canal near MP 8.0 of the proposed route.

This alternative follows existing utilities and stays immediately south of the more intensive camping uses at Midway and Grays Well camping areas, but would be installed in an area used by OHVs. Specifically, the ISDRA Transmission Line Alternative would be installed south of Grays Well Road that provides access to the Midway Campground and the Plank Road monument, and would stay south of that road until crossing under the freeway. The area crossed by the first half of the alternative is also presently subject to a vehicle closure to protect desert plant species, including the Peirson's milk-vetch. The BLM has indicated that it plans to maintain the vehicle closure for the foreseeable future (Kastoll 2007).

Although the ISDRA Transmission Line Alternative parallels existing linear facilities, according to BLM staff it crosses both the Buttercup Management Area and adjacent land that is more highly trafficked by OHV users than the proposed route. Additionally, the alternative crosses dunes with greater relief, which would entail more difficult construction and may potentially require measures to protect the integrity of the transmission tower footings, depending on site-specific conditions. Because of the heavier OHV use, construction constraints, and plan of the BLM to maintain the vehicle closure for the foreseeable future, this alternative was eliminated from further consideration.

Modified ISDRA Transmission Line Alternative – After the issuance of the draft EIS/EIR, a modified version of the ISDRA Transmission Line Alternative was evaluated to address concerns regarding a cultural resources site located along the proposed route (Site CA-IMP-8314) while also avoiding the BLM's vehicle closure area that would be affected by the original ISDRA Transmission Line Alternative. The Modified ISDRA Transmission Line Alternative deviates from the proposed route at MP 5.6 and continues southwest and follows the existing transmission line for approximately 1.1 miles. The alternative then turns west and would cross Interstate 8 and the All-American Canal (using the HDD method) before rejoining the proposed route at approximate MP 8.2 (see Figure 3.2.3-5). An environmental comparison of the Modified ISDRA Transmission Line Alternative with the corresponding segment of the proposed route is presented in Table 3.2.3-4.

The Modified ISDRA Transmission Line Alternative would be longer and would affect more land during construction and operation compared to the proposed route. Both routes would be located adjacent to existing rights-of-way for their entire lengths and both would affect only BLM/BOR-managed lands within Utility Corridor L. Therefore, a CDCA Plan amendment would not be required for the Modified ISDRA Transmission Line Alternative or the corresponding segment of the proposed route. Although both routes would cross Interstate 8 and the All-American Canal, the proposed route would require two separate crossings (a conventional bore at MP 5.7 for Interstate 8 and an HDD at MP 8.1 for the All-American Canal). The alternative route would only require one HDD that would cross both Interstate 8 and the All-American Canal near MP 8.0 of the proposed route.

TABLE 3.2.3-4

Environmental Comparison of the Modified ISDRA Transmission Line Alternative with the Proposed Route MPs 5.6 to 8.2

Environmental Factor	Unit	Modified ISDRA Transmission Line Alternative	Proposed Route
Length of route	Miles	3.1	2.6
Construction right-of-way [a]	Acres	30.1	25.2
Permanent right-of-way [b]	Acres	11.3	9.5
Adjacent to existing rights-of-way	Miles	3.1	2.6
Canals crossed	Number	1	1
Roads crossed	Number	1	1
BLM/BOR-managed land crossed within designated utility corridor	Miles	3.1	2.6
BLM/BOR-managed land crossed outside designated utility corridor that would require a CDCA Plan amendment	Miles	0.0	0.0
Eligible cultural resources sites	Number	1	1

[a] Based on an 80-foot-wide construction right-of-way.

[b] Based on a 30-foot-wide permanent right-of-way.

On February 2, 2007, North Baja met with members of the Quechan Indian Tribe, the BLM, and the BOR to discuss measures to reduce or avoid impacts on Site CA-IMP-8314. The site is on BOR land and both the BOR and the Quechan Indian Tribe requested that North Baja avoid the site. In addition, in a letter dated February 9, 2007, the Kwaaymii Laguna Band of Indians asked that the site be avoided. Although the original ISDRA Transmission Line Alternative avoided the site, it crossed an area closed by the BLM to protect the Peirson's milk-vetch. This was one of the reasons the ISDRA Transmission Line Alternative was eliminated from further consideration.

During a meeting on March 13, 2007 to address issues presented in the Kwaaymii Laguna Band of Indians' February 9, 2007 letter, North Baja suggested a realignment utilizing only the western portion of the original ISDRA Transmission Line Alternative to avoid Site CA-IMP-8314. By utilizing only the western portion of the ISDRA Transmission Line Alternative (beginning at MP 5.6 of the proposed route), the Modified ISDRA Transmission Line Alternative would also avoid the BLM's vehicle closure area. Although the Modified ISDRA Alternative would avoid Site CA-IMP-8314, a portion of another cultural resources site (the Plank Road) was identified during surveys along the alternative alignment. North Baja would avoid impacts on this portion of the Plank Road by installing exclusion fencing and monitoring during construction (see Section 4.11.3). The BLM has indicated that avoidance of the Plank Road would not be difficult and supports the alternative route because it avoids Site CA-IMP-8314 (Simmons 2007). In addition, the BLM has no biological resources concerns along the Modified ISDRA Transmission Line Alternative (Steward 2007).

The Modified ISDRA Transmission Line Alternative is longer and affects more land compared to the proposed route. Like the original ISDRA Transmission Line Alternative, it crosses both the Buttercup Management Area and adjacent land that is more highly trafficked by OHV users than the proposed route. However, the Modified ISDRA Transmission Line Alternative avoids a cultural resources site that the Quechan Indian Tribe, the Kwaaymii Laguna Band of Indians, and the BOR requested that North Baja avoid. This alternative also avoids an area closed by the BLM to protect the Peirson's milk-vetch and does not affect any other sensitive biological resources. The Modified ISDRA Transmission Line

Alternative would be located entirely on BLM-managed lands and the BLM finds the alternative route acceptable. Therefore, **the Agency Staffs recommend that:**

- **North Baja shall adopt the Modified ISDRA Transmission Line Alternative between MPs 5.6 and 8.2 of the IID Lateral**.

ISDRA Grays Well Road Alternative – During Project planning, the BLM suggested that the area west of the Buttercup Campground between Grays Well Road and Interstate 8 is less intensively used than the area to the south of Grays Well Road. The ISDRA Grays Well Road Alternative considers a route in the strip between Interstate 8 and Grays Well Road. This area currently contains a wood pole line, a fiber optic line (Level 3), and is constricted by a relatively wide (400-foot) CalTrans right-of-way. Early investigations suggested that there may be room within this strip for the proposed 16-inch-diameter IID Lateral; however, a recent field survey to locate the Level 3 fiber optic line concluded that there is not sufficient space within this strip for the pipeline. Therefore, this alternative is infeasible and was eliminated from further consideration.

Gasoducto Bajanorte Pipeline Route Alternative

A route alternative between the Gasoducto Bajanorte pipeline and the IID's El Centro Generating Station was evaluated (see Figure 3.2.3-6). The alternative interconnects with the Gasoducto Bajanorte pipeline west of Mexicali in the vicinity of La Rosita, Mexico. From there it proceeds north and crosses the Mexico-U.S. border into California near the junction of the Westside Main Drain and the All-American Canal. Once in the United States, the alternative proceeds north adjacent to Brockman Road until it crosses the New River 5 miles west of Heber. It then turns and proceeds east following McCabe Road to a point about 0.5 mile east of Dogwood Road. At this point, the alternative proceeds north across Interstate 8 and a congested area surrounding Evan Hewes Highway until it joins the proposed route just east of the IID's El Centro Generating Station.

This alternative would be approximately 23 miles in length and thus would be substantially shorter than the proposed IID Lateral. About 18 miles of the alternative would be within the United States. Nearly all of the pipeline route in the United States (about 17.5 miles) would cross irrigated agricultural land; the remaining 0.5 mile would cross urban land uses.

Although the alternative would have less environmental impact than the IID Lateral based on its shorter length, it would not meet the Project objective of providing the IID with a connection to the U.S. interstate pipeline systems. As currently configured, the IID Lateral would provide the IID with direct access to U.S. gas supplies via the existing interconnection between North Baja and El Paso. As discussed in Section 1.1, the El Centro Generating Station currently receives its natural gas from SoCalGas. The volumes delivered by the North Baja system would be used to serve the existing generating load at the station and would provide supply and supplier diversification for the IID. North Baja would continue to provide southbound natural gas transportation of domestic supplies on its system via backhaul. In this way the IID Lateral would enable the IID to gain access to domestic supplies as well as the LNG sources in Mexico providing it with greater flexibility and reliability in choosing its gas supplies. The alternative would restrict the IID to LNG-source gas solely and would not provide the IID with the expanded access to the domestic supplies that it needs. For this reason, the Gasoducto Bajanorte Pipeline Route Alternative is not considered to be a viable alternative to the proposed IID Lateral and was eliminated from further consideration.

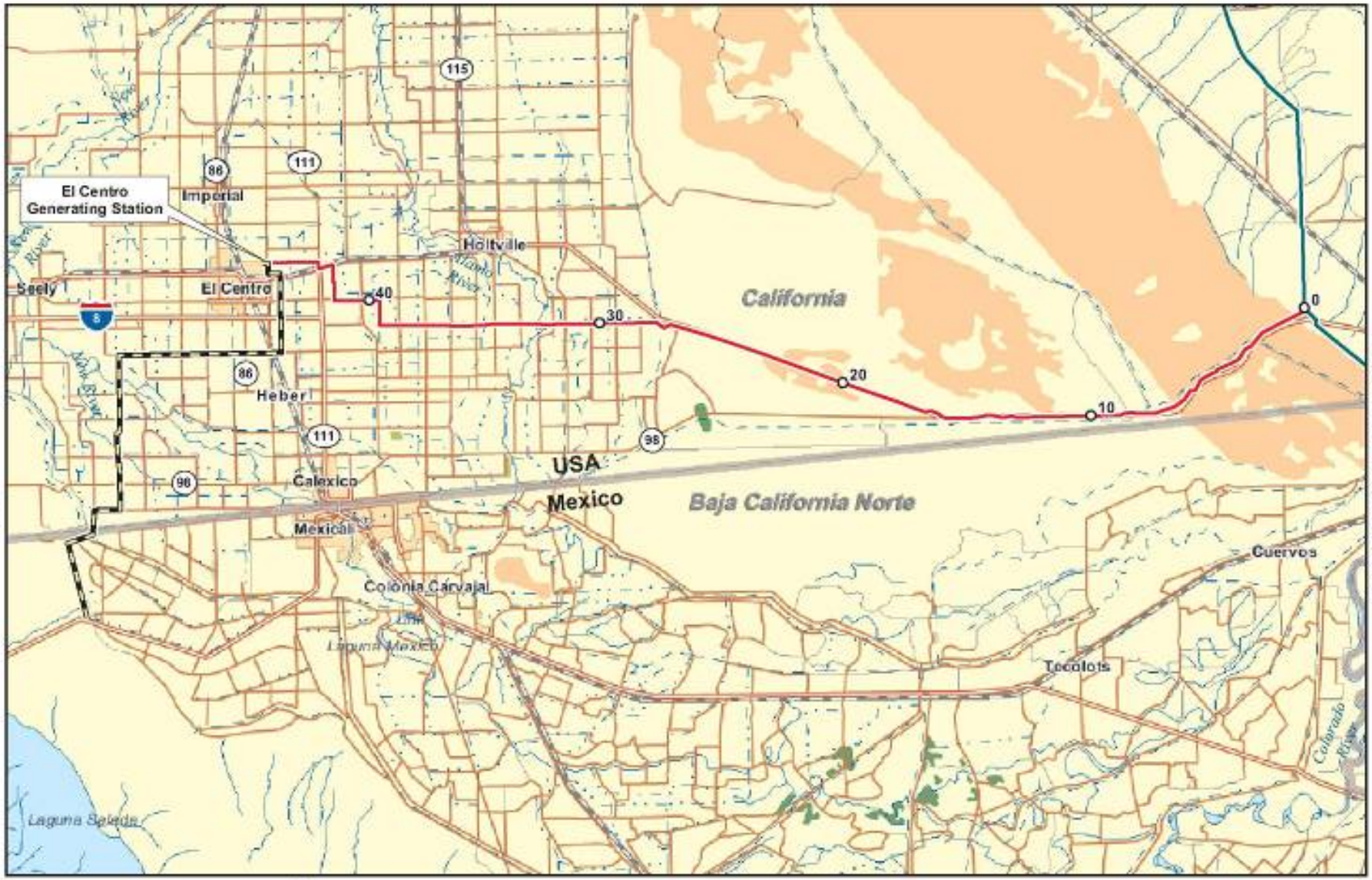

Figure 3.2.3-6
North Baja Pipeline Expansion Project
Gasoducto Bajanorte Pipeline Route Alternative

3.2.4 Route Variations

Route variations differ from system alternatives or route alternatives in that they are identified to reduce impact on specific localized resource issues such as residences, cultural resources sites, biological resources, and areas of steep terrain. Additionally, route variations may be examined to avoid conflicts with other projects. The four route variations evaluated for the proposed Project are described below.

3.2.4.1 East Mesa North Route Variation

North Baja initially planned to locate the IID Lateral in the northern road shoulder of Evan Hewes Highway from MPs 8.5 to 26.0; however, the BOR's plans for the Drop 2 Storage Reservoir would interfere with this route. Therefore, North Baja adjusted its proposed route. The proposed route between MPs 8.1 and 8.5 is on the north side of Evan Hewes Highway. It then crosses the highway to the south side to avoid the BOR's planned supply canal location and continues on the south side of the highway for 5.1 miles. The proposed route then crosses back to the north side of the highway at MP 13.6.

The East Mesa North Route Variation depicted on Figure 3.2.4-1 deviates from the proposed route for 4.1 miles (from MPs 9.5 to 13.6) where it would stay on the north side of Evan Hewes Highway (as initially planned) instead of crossing to the south side of the road. This variation was originally developed because the BOR indicated it would pursue discussions with Imperial County regarding the abandonment of the Evan Hewes Highway right-of-way for a distance of 3 miles between the BOR lands and the private lands near Gordon's Well. The BOR's intent was to locate the canal and associated access roads in the middle of the highway. If this were the case, there would not be room for the IID Lateral on the south side of the new canal access road without conflicting with the CalTrans right-of-way for Interstate 8 and North Baja would need to adopt the East Mesa North Variation on the north side of Evan Hewes Highway.

As of January 3, 2006, however, the BOR has stated that there is a 98 percent chance that the Drop 2 Canal centerline would be just north of Evan Hewes Highway (Wahl 2006). Because the East Mesa North Variation would conflict with the BOR's Drop 2 Storage Reservoir Project, this alternative was considered infeasible and eliminated from further consideration.

3.2.4.2 Imperial Valley Route Variations

The proposed route through the Imperial Valley includes the area from the west side of the East Highline Canal at MP 27.8 to the terminus of the IID Lateral at the El Centro Generating Station. From MP 27.8, the proposed route stays on Hunt Road and East Chick Road until MP 38.7 where it turns north on McGrew Road for 0.2 mile before crossing Interstate 8 (using the bore method). The proposed route then continues adjacent to a private field road to MP 39.7. At this point, the proposed route turns west along East Ross Road to MP 41.4 and then turns north along Parker Road for 1.5 miles. The proposed route would then be located in field roads on the north side of Interstate 8 for 0.5 mile until turning north along SR 111 for 0.2 mile where it would then turn west along the IID powerlines to MP 45.7.

The number of residences near the route, right-of-way encumbrances on private property, amount of farmland crossed, conflicts with other utilities, and scoping comments were considered in developing three variations to the proposed route. All three of these variations would be located primarily within existing Imperial County road rights-of-way. The three Imperial Valley variations are depicted on Figure 3.2.4-2.

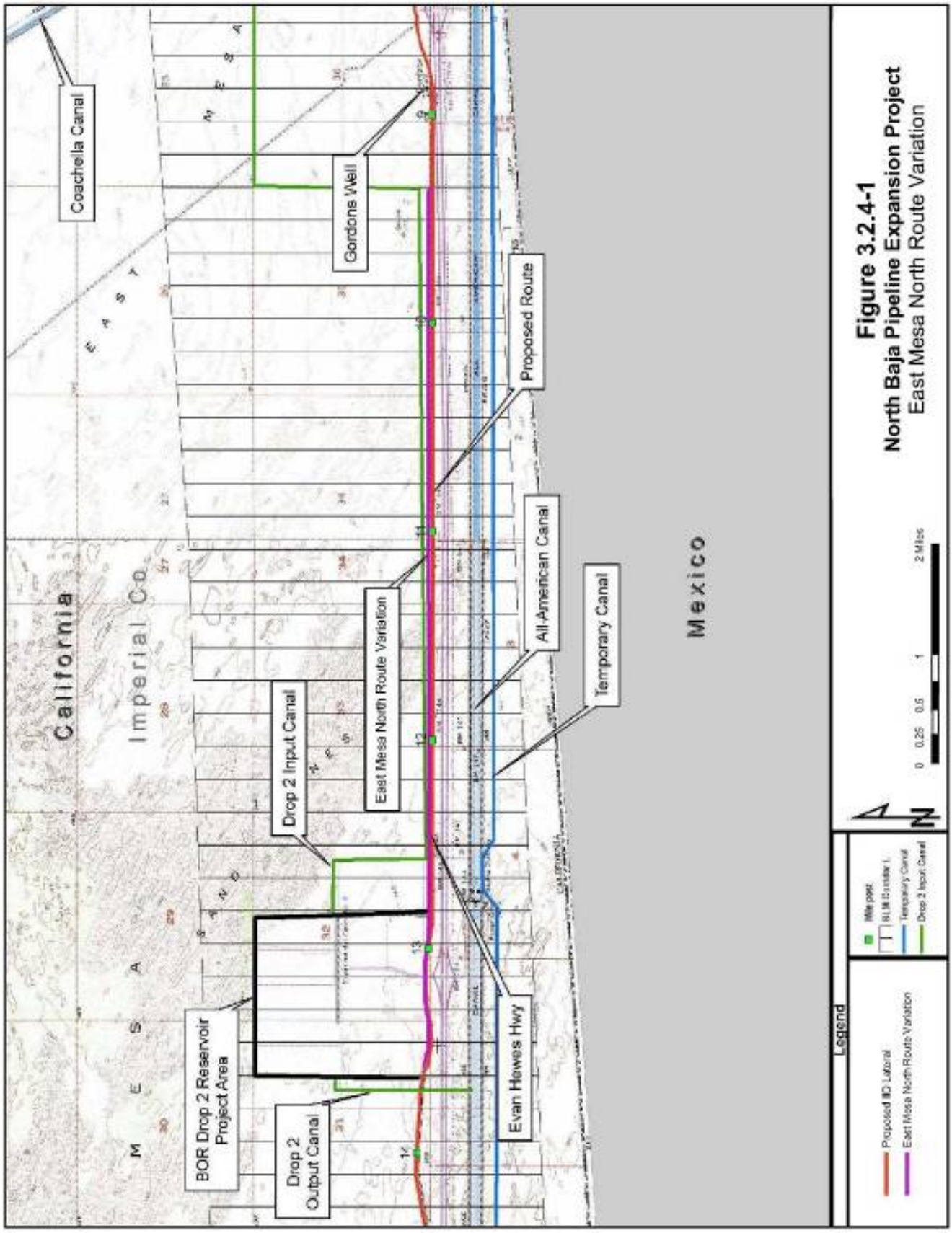

Figure 3.2.4-1
North Baja Pipeline Expansion Project
East Mesa North Route Variation

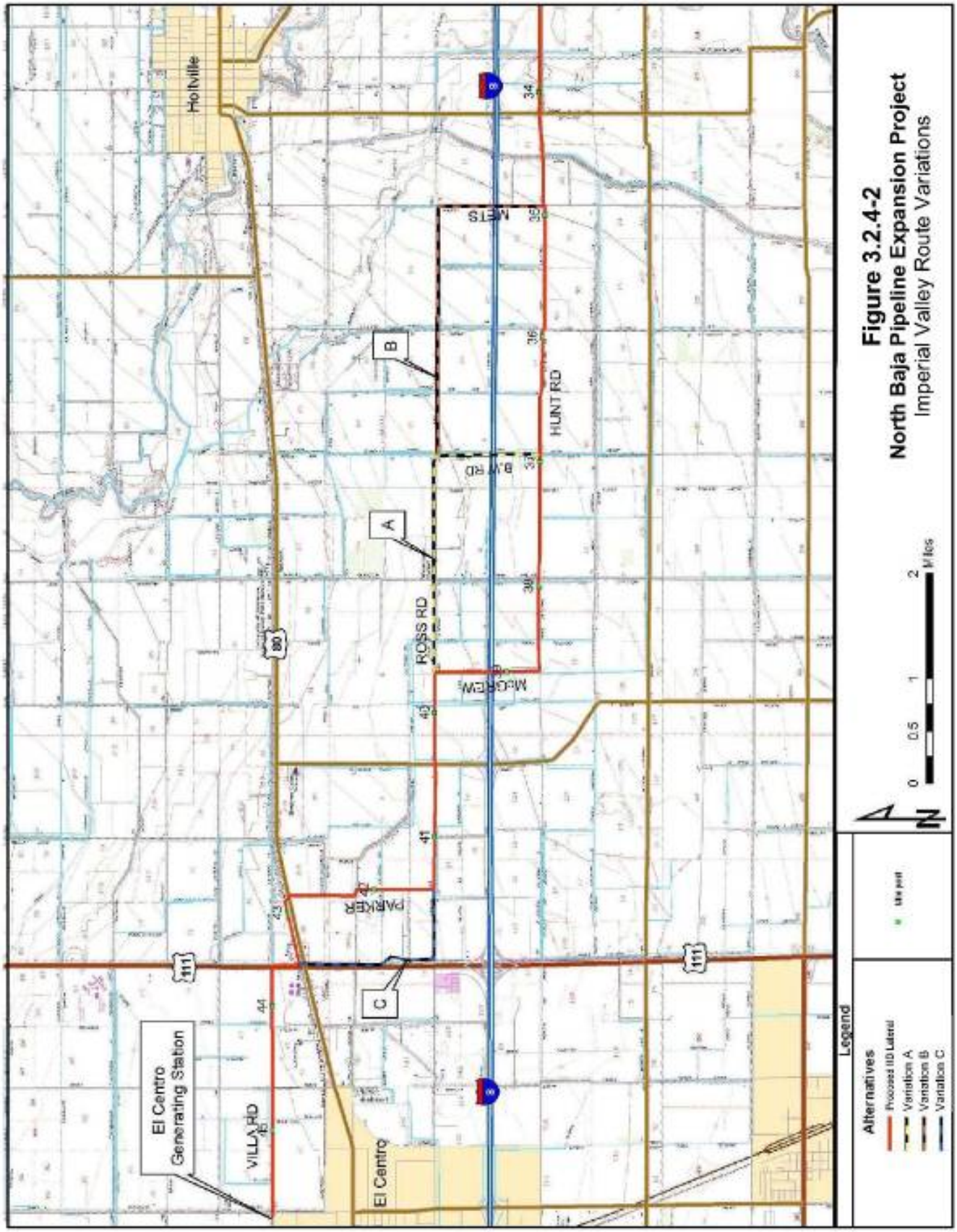

Figure 3.2.4-2
North Baja Pipeline Expansion Project
Imperial Valley Route Variations

Variation A

Variation A deviates from the proposed route at MP 36.9 and turns north along Barbara Worth Road, which crosses over Interstate 8. The pipeline would be bored under Interstate 8, and the workspace would be located in a field adjacent to the road right-of-way. North of Interstate 8, the variation continues north along Barbara Worth Road for approximately 0.5 mile before turning west along East Ross Road and rejoining the proposed route at MP 39.7.

Variation A would avoid the open field crossing north of McGrew Road, but it would be located for a longer distance in East Ross Road, which is a busier road with more utility encumbrances than the proposed route. The proposed route follows Hunt Road, which is unpaved, has fewer utilities, fewer obstructions, and fewer residences. Variation A, which follows East Ross Road, would impact a greater number of immediately adjacent residences, and potentially would have to be routed around underground pipe structures associated with irrigation. Any route variations around these pipe structures would require the pipeline to be placed in the adjacent agricultural fields. Because of these disadvantages, Variation A was eliminated from further consideration.

Variation B

Variation B deviates from the proposed route at MP 34.9 and turns north on Mets Road for 0.4 mile before crossing Interstate 8 and continuing north on Mets Road for 0.6 mile to East Ross Road. At East Ross Road it turns west and continues for 4.5 miles until it rejoins the proposed route at MP 39.7.

Similar to Variation A, Variation B would avoid the open field crossing north of McGrew Road. However, it would be located for a longer distance in East Ross Road, which is a busier road with more utility encumbrances than the proposed route. Because of these disadvantages, Variation B was eliminated from further consideration.

Variation C

During the scoping process, landowners along the proposed route on Parker Road expressed concerns about impacts on their water delivery system, fences, and landscaping, as well as the possibility of losing rental income during construction. Variation C attempts to address this concern by continuing west along East Ross Road beyond Parker Road for an additional 0.7 mile. The variation then turns north along SR 111, which is a freeway at this location. The pipeline would be installed in agricultural lands for approximately 0.2 mile and would then follow an existing transmission line corridor with many other utilities adjacent to the freeway until rejoining the proposed route at MP 43.4.

Both Variation C and the corresponding segment of the proposed route are in areas where multiple utilities are already buried adjacent to the road. During field investigations, North Baja determined that the utility congestion along the proposed route did not preclude space for the pipeline. However, North Baja has not been able to confirm that space is available for Variation C because SR 111, a frontage road, a steel tower electric transmission line, and a canal are existing linear features within the corridor. North Baja states that it is likely Variation C would, at a minimum, require parallel encroachments within electric transmission facility and/or canal easements. A scoping comment was received from the owner of a business along the Variation C route expressing concern regarding potential negative impacts and disruptions to his business and the proximity of the pipe to the electrical transmission lines. Constructing or operating a pipeline in proximity to an electric transmission line is not generally considered to pose a safety risk; however, there could be some temporary inconvenience or disruption to the business during construction if Variation C were adopted.

To address the concerns of the landowners along the proposed route on Parker Road, North Baja has agreed to install the pipeline on the opposite side of Parker Road from the cluster of homes on the

west side. North Baja would avoid water delivery systems, including both canals and pipes, by drilling or digging beneath them; therefore, no disruption of water service is expected. However, in the unlikely event of damage to a water system, North Baja would repair the system and provide an alternative water source until the repair is made. North Baja has provided site-specific residential construction mitigation plans for all residences and businesses within 100 feet of the construction work area, including the portion of the route on Parker Road (see site-specific plan numbers 4200-E-209 through 216 in Appendix O). These plans show that the fences, trees, and other landscaping along Parker Road would be avoided during construction. As shown in Table 4.8.3-1, the only residential features that would be potentially affected by construction along Parker Road are one gravel driveway and two mailboxes. North Baja has stated that it does not believe construction of the Project would result in loss of rental income because the residents/tenants would still have access to their homes. North Baja would, however, make every effort to accommodate special needs on a case-by-case basis, including reimbursing an owner who is unable to rent a property because of North Baja's construction activities.

Because North Baja has been able to address the specific concerns of the landowners along Parker Road, it is uncertain whether there is adequate space to install the pipeline along Variation C, and Variation C would merely transfer impacts from one or more property owners or communities to another without conferring obvious environmental advantages, Variation C was eliminated from further consideration.

3.2.5 Alternative Delivery Points - Arrowhead Alternative

In its February 7, 2006 FERC application, North Baja proposed to deliver gas to the SoCalGas system and Blythe Energy Facility I supply pipeline at a meter station located along Riviera Drive. On May 24, 2006, North Baja filed an alternative to these delivery points. This alternative, referred to in the draft EIS/EIR as the Arrowhead Alternative, would deliver natural gas to the SoCalGas system at SoCalGas' existing Blythe Compressor Station at the intersection of 14th Avenue and Arrowhead Boulevard in Riverside County. The compressor station is approximately 2 miles north of the location on 18th Avenue where the existing A-Line and proposed B-Line cross Arrowhead Boulevard. The alternative delivery point to the Blythe Energy Facility I supply pipeline would be immediately adjacent to the Blythe Compressor Station. Metering for the alternative delivery points would occur at a new meter station located within the fenceline of the Blythe Compressor Station.

At the time of its May 24, 2006 filing and as analyzed in the draft EIS/EIR, the facilities associated with the Arrowhead Alternative included (see Figure 3.2.5-1):

- Arrowhead Extension – 2.1 miles of 36-inch-diameter pipeline extending from MP 7.4 of the proposed B-Line to SoCalGas' existing Blythe Compressor Station.
- Blythe-Arrowhead Meter Station and Pig Receiver – these facilities would occupy a 160-foot by 200-foot site within the fenced yard of the existing Blythe Compressor Station. The gas would be odorized before delivery into the SoCalGas system at the existing odorant facilities within the Blythe Compressor Station.
- BEI Piping and Tap – 40 feet of 8-inch-diameter pipeline from the proposed Blythe-Arrowhead Meter Station to the existing Blythe Energy Facility I supply pipeline and a tap into the existing pipeline.
- Pig Launcher, Taps, and Crossover Piping to the Existing A-Line and Proposed B-Line – these facilities would be located in a 150-foot by 225-foot fenced yard in the northeast corner of the intersection of 18th Avenue and Arrowhead Boulevard.

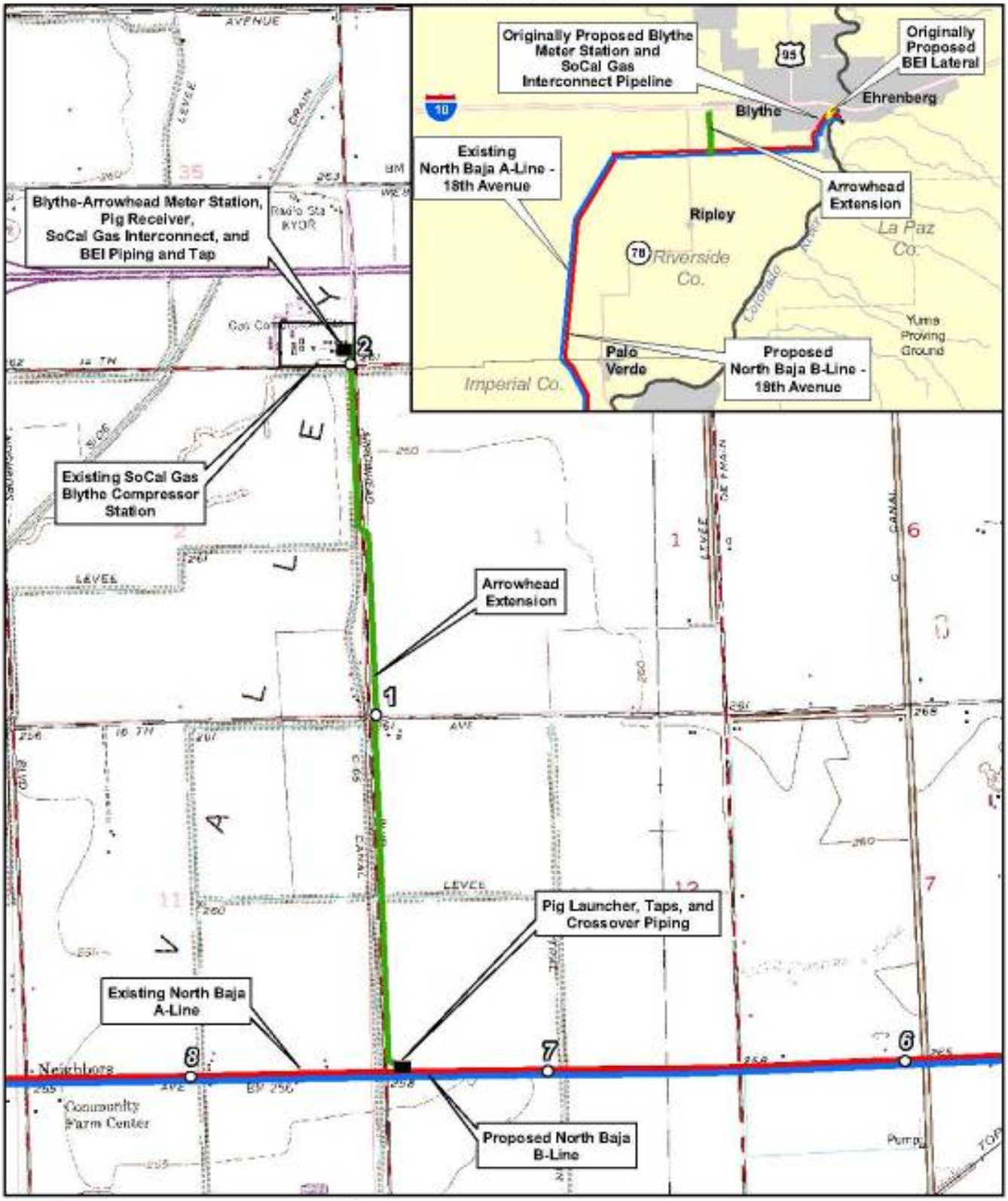

Figure 3.2.5-1
North Baja Pipeline Expansion Project
Arrowhead Alternative as Analyzed in the Draft EIS/EIR

The facilities that would be eliminated by the Arrowhead Alternative included:

- the Blythe Meter Station on Riviera Drive;
- 20 feet of interconnect piping with SoCalGas at the originally proposed Blythe Meter Station;
- 0.6 mile of 10-inch-diameter pipeline (BEI Lateral) extending from the originally proposed Blythe Meter Station site to an interconnection with the existing Blythe Energy Facility I supply pipeline; and
- an odorant facility at the Ogilby Meter Station.

Although the above facilities would be eliminated, adoption of the Arrowhead Alternative would result in a net gain in the amount of facilities that would be constructed because the new modified connection point into the SoCalGas system would not eliminate the need to connect with the existing Ehrenberg Compressor Station to allow for deliveries to El Paso and other markets outside of California, which is currently North Baja's contractual requirement.

Table 3.2.5-1 provides a comparison of the Arrowhead Alternative with the originally proposed Project facilities that would be eliminated if the Arrowhead Alternative were adopted (referred to in this analysis as the corresponding segment of the proposed Project).

As shown in Table 3.2.5-1, the Arrowhead Alternative would disturb 24.3 acres of land during construction (20.6 acres for the pipeline right-of-way, 2.0 acres for aboveground facilities, and 1.7 acres for temporary extra workspaces). Of this total, 6.2 acres of land would be permanently retained for the pipeline right-of-way (4.7 acres) and aboveground facilities (1.5 acres). In comparison, the corresponding segment of the proposed Project would disturb 9.0 acres of land during construction (4.4 acres for the pipeline right-of-way, 4.5 acres for aboveground facilities, and 0.1 acre for temporary extra workspaces), of which 5.2 acres of land would be permanently retained (0.7 acre for the pipeline right-of-way and 4.5 acres for aboveground facilities). The Arrowhead Alternative would impact 16.1 acres of agricultural land during construction; no agricultural land would be affected by construction of the corresponding segment of the proposed Project.

The Arrowhead Alternative would permanently convert 0.8 acre of agricultural land to utility use, whereas the corresponding segment of the proposed Project would permanently convert 4.5 acres of open land to utility use. Except for the new odorant facility at the existing Ogilby Meter Station, the corresponding segment of the proposed Project would be within the City of Blythe near existing and proposed residential development, while the Arrowhead Alternative would be in an agricultural area with only a few scattered residences and no proposed residential development. There would be 7 residences within the potential impact radius (PIR)[2] of the Arrowhead Alternative compared to 36 residences within the potential impact radius of the corresponding segment of the proposed Project. The minor visual impact associated with the Blythe Meter Station would be avoided by adoption of the Arrowhead Alternative.

[2] The potential impact radius is the radius of a circle within which the potential failure of a pipeline could have considerable impact on people or property.

TABLE 3.2.5-1

Environmental Comparison of the Arrowhead Alternative with the Corresponding Segment of the Proposed Project

Environmental Factor	Unit	Arrowhead Alternative	Corresponding Segment of the Proposed Project
Land Requirements			
Length of pipeline	Miles	2.1	0.6
Area disturbed during construction			
Pipeline right-of-way	Acres	20.6	4.4
Aboveground facilities	Acres	2.0	4.5 [a]
Temporary extra workspaces	Acres	1.7	0.1
Total	Acres	24.3	9.0
Area permanently retained			
Pipeline right-of-way	Acres	4.7	0.7
Aboveground facilities	Acres	1.5	4.5 [a]
Total	Acres	6.2	5.2
Biological resources			
Habitat types affected			
Creosote scrub	Acres	0.0	6.1
Agricultural	Acres	16.1	0.0
Urban (transportation)	Acres	8.2	2.9
Cultural resources			
Number of sites in area of potential effect	Number	6	0
Number of sites likely to be potentially eligible for listing on the National Register of Historic Places	Number	0 [b]	0
Land use and other resources			
Within existing rights-of-way	Miles	1.0	0.3
Within new right-of-way	Miles	1.1	0.3
Active agricultural land	Acres	16.1	0.0
Homes and businesses within 100 feet of construction work area	Number	0	2
Residential structures within potential impact radius	Number	7	36
Drains and canals crossed	Number	3 [c]	0
Other Factors Associated with Aboveground facilities			
New odorant facility	Yes/No	No	Yes
Converted to utility use	Acres	0.8	4.5
Distance from meter station to nearest residences	Feet	1,200	1,000
Distance to proposed residential development	Feet	0 [d]	300
Zoned agricultural	Acres	0.0	0.0
Zoned rural residential	Acres	0.8	4.3

[a] Includes 4.3 acres for the Blythe Meter Station and 0.2 acre for the expansion of the site at the existing Ogilby Meter Station needed to install the odorant facility.

[b] Without testing complete.

[c] The C-05 Canal and two unnamed canals would be crossed. The C-05 Canal would be bored; the two unnamed canals would be open cut.

[d] There are no known proposed residential developments.

Based on North Baja's cultural resources surveys, there are six cultural resources along the Arrowhead Alternative compared to no cultural resources in the area of potential effect for the corresponding segment of the proposed Project. The six cultural resources along the Arrowhead Alternative have not been evaluated to determine eligibility for listing on the NRHP; however, North Baja would avoid impacts on these six cultural resources. Neither the Arrowhead Alternative nor the corresponding segment of the proposed Project would affect wetlands, riparian resources, or native habitats. Impacts on special status species would be similar.

Additional analysis of the Arrowhead Alternative was included in the applicable resource discussions in Section 4 of the draft EIS/EIR that was issued on September 27, 2006.

On November 21, 2006, North Baja filed an amendment to its February 7, 2006 application. The amendment requested authorization to adopt the Arrowhead Alternative as part of the proposed Project. North Baja's application for an amendment stated that SoCalGas has indicated that the alternative would serve its operational needs better than the originally proposed delivery point at Riviera Drive near the Colorado River. At the December 6, 2006 public meeting held in Blythe, California to receive comments on the draft EIS/EIR, comments were received from the developer of a planned residential community (Edgewater Lane Planned Residential Community) that consists of 45 home sites along Riviera Drive that has already been approved by the Blythe Planning Commission and City Council. The developer commented that the Blythe Meter Station would impact the residential community, and he expressed a preference for the Arrowhead Alternative, which would site the meter station within the yard of SoCalGas' existing Blythe Compressor Station. Furthermore, locating the meter station within an existing compressor station yard would reduce its visual impact.

Other advantages of the Arrowhead Alternative include the elimination of 0.6 mile of pipeline lateral and the odorant facility at the Ogilby Meter Station. In addition, there would be 29 fewer residences within the PIR of the Arrowhead Alternative, compared to the corresponding segment of the originally proposed Project. Although adoption of the Arrowhead Alternative would result in a net gain in the amount of facilities that would be constructed, based on the detailed analysis in the draft EIS/EIR, the Arrowhead Alternative would create no significant impacts. Because of the advantages of the Arrowhead Alternative, further consideration of the corresponding segment of the originally proposed Project was eliminated and the Arrowhead Alternative has been incorporated into the analysis of the proposed Project in this final EIS.[3]

3.2.6 Aboveground Facility Site Alternatives

As described in Section 2.1.2, the proposed Project would require new and modified aboveground facilities. The B-Line would require modifications at North Baja's existing Ehrenberg Compressor Station and an expansion of its existing Ogilby Meter Station to allow northbound flow of gas. Additionally, metering modifications inside the existing El Paso Meter Station at the Ehrenberg Compressor Station site would be necessary to allow LNG-source gas to be delivered into the El Paso system. North Baja would also construct two pig launchers, three pig receivers, and nine valves along the B-Line. The Arrowhead Extension would require the construction of one pig launcher, two taps, and crossover piping at the tie-in with the A-Line and B-Line; one meter station; and one pig receiver. The IID Lateral would require the construction of one tap and pig launcher at the tie-in with the B-Line, one meter station, one pig receiver, and four valves.

All of the proposed new and modified facilities are necessary to meet the purpose and need of the North Baja Pipeline Expansion Project. If the modifications at the existing Ehrenberg Compressor Station and El Paso and Ogilby Meter Stations are not made, the facilities would not be able to accommodate northbound flow of gas or deliver LNG-source gas to El Paso. Construction of these facilities other than at the existing facilities would require disturbance of previously undisturbed land and construction of additional pipeline facilities to connect them to the proposed pipeline. The alternative of creating new industrial sites would not be environmentally preferable to the proposed Project and thus was eliminated from further consideration.

[3] North Baja's November 21, 2006 filing requesting authorization to adopt the Arrowhead Alternative made minor revisions to the acreage affected by temporary extra workspaces and aboveground facility sites associated with the alternative, which have been incorporated into the analysis in this final EIS. In addition, on February 1, 2007, North Baja filed an amendment to its application filed on February 7, 2006, as amended on November 21, 2006, eliminating the BEI Lateral that would supply natural gas to the Blythe Energy Facility I supply pipeline. Therefore, the BEI piping and tap originally referred to as part of the Arrowhead Alternative have been eliminated from analysis in this final EIS.

The Blythe-Arrowhead Meter Station would be constructed and operated at the terminus of the Arrowhead Extension within the yard of SoCalGas' existing Blythe Compressor Station. This facility is needed to measure gas volumes delivered from the North Baja system into the SoCalGas system. In the draft EIS/EIR, the originally proposed Blythe Meter Station, which would be on a 4.3-acre site along Riviera Drive in Blythe at MP 0.5, was analyzed. As discussed in Section 3.2.5, the Arrowhead Alternative, which includes the Blythe-Arrowhead Meter Station, is considered to be environmentally preferable and the Blythe Meter Station was eliminated from further consideration.

The taps and crossover piping needed to connect the Arrowhead Extension with the existing A-Line and proposed B-Line as well as the associated pig launcher would be located in a fenced yard in the northeast corner of the intersection of 18th Avenue and Arrowhead Boulevard. Because the location of these facilities is dictated by the location of the existing and proposed pipelines, and no significant impacts were identified at the site of these facilities, an alternative location for the taps, crossover piping, and pig launcher associated with the Arrowhead Alternative was not evaluated.

The adoption of the Arrowhead Alternative would eliminate the need for North Baja to install an odorant facility at the Ogilby Meter Station because the gas would be odorized by SoCalGas at its existing odorant facilities within the Blythe Compressor Station. As discussed in the draft EIS/EIR, construction of the odorant facility at the Ogilby Meter Station would require an approximate 0.2-acre expansion of the Ogilby Meter Station yard and approximately 400 feet of a new permanent 22-foot-wide access road to allow odorant supply trucks ingress and egress to the yard. As discussed in Section 3.2.5, the Arrowhead Alternative is considered to be environmentally preferable and the odorant facility at the Ogilby Meter Station was eliminated further consideration.

Five of the nine valves along the B-Line would be collocated with existing valves at the existing aboveground facility sites; the remaining four valves would be collocated with the four existing valves along the A-Line. One of the valves associated with the IID Lateral would be collocated with the tap and pig launcher at the tie-in to the B-Line and the remaining three valves would be located along the pipeline route. The locations of these valves are dictated, in a general sense, by the class location of the area through which the pipeline passes, as required in Title 49 CFR Part 192. Although the specific location of a valve could be adjusted slightly, the valves cannot be eliminated or moved significantly. None of the proposed valve sites would be located in prime farmland or would affect wetlands, unique vegetation communities, critical wildlife habitat, or cultural resources. The alternative of relocating the valves to other sites would create new disturbance without providing any apparent environmental advantages and, therefore, was eliminated from further consideration.

Pig launchers and receivers would be collocated with other aboveground facilities; therefore, the alternative of relocating these facilities would create new disturbance without providing any apparent environmental advantages. For this reason, this alternative was eliminated from further consideration.

During the scoping process, comments were received from the ICAPCD and the Imperial County Board of Supervisors that the compressor station associated with the upstream facilities in Mexico should be located in the United States so that emissions can be mitigated appropriately. As discussed in Section 1.4, the upstream facilities are subject to the sovereign jurisdiction of another nation and there is no jurisdictional basis for the FERC, the CSLC, the BLM, or the BOR to approve, mitigate, or reject such facilities.

A scoping comment was also received suggesting that the impacts associated with the IID Lateral could be avoided by siting the IID El Centro Generating Station on the old Brock Research facility property in Imperial County. As discussed in Sections 1.1 and 2.1, the El Centro Generating Station is an existing facility that would be the delivery point for the IID Lateral.